

REMARKS

An information disclosure statement and references cited in the search report for the corresponding European application are attached.

Claim 5 has been amended to incorporate the limitation of claim 6, adding the limitation that the hub extends above the sunken surface essentially *only* by the distance which the sunken surface lies below the outer flange.

New claims 13 recites that the backing plate is made of injection molded plastic; basis for this found at page 1, lines 18-20 and lines 31-32.

Allowed claims 9 and 10 have been amended for clarity; the outer flange carries a plurality of abrasive flaps, as recited at page 3, lines 3-4. This arrangement is shown in U.S. Patent No. 5,951,389 submitted herewith. Note that this patent also relates to an abrasive flap wheel having a plastic backing plate (see in particular Figure 10).

Claims 5-8 stand rejected under 35 U.S.C. §102(b) as being anticipated by Patrello U.S. 4,541,205. To the extent that this rejection would be applied to claims as presently amended, it is traversed for the reasons following.

Patrello discloses an abrasive wheel assembly comprising a hub 14, a pair of bushings 30, 32, and an abrasive wheel 12 which is keyed on the hub and fixed thereto. The hub 14 has a rearward extending nut-like hub portion 16, which is provided with an internal thread 48, a forward extending sleeve 52, and a radially outward alignment surface 44 which extends above a dished portion 46 attached to the hub portion 16. The sleeve 52 extends well beyond the alignment surface 44 so that it can be deformed backward to retain the abrasive wheel 12 and bushings 32, 32 firmly against the hub. For this reason the hub is made of metal. See column 4, lines 32-44.

Applicant's claim 5 as presently amended recites the hub extending above the sunken surface *only* by the distance that the sunken surface lies below the outer flange. In other words, the top of the hub is essentially level with the outer flange. There can be no suggestion to so modify the sleeve 52 of Patrello, because it would no longer extend sufficiently above the abrasive wheel 12 to permit deforming the sleeve to retain the wheel against the hub. Thus Patrello does not anticipate claim 5 and cannot render it obvious regardless of what a secondary reference might show.

Hettes et al. U.S. 5,951,389, submitted herewith with the European search report, discloses an abrasive flap wheel of the general type to which the present invention relates. In this regard it is distinguished from the solid grinding wheels disclosed in the Mackay and Patrello patents cited in the U.S.

Hettes et al. (Fig. 110) discloses a backing plate for an abrasive flap wheel, comprising a central hub portion 306 having internal threads 318 and a radially extending flange 304 to which abrasive flaps 302 are fixed. There is no sunken surface, and the hub does not extend above such a sunken surface. As such the backing plate is only suitable for small diameter discs (col. 5, lines 36-42). For larger discs, the tilting force when the grinding wheel is held at an angle to a working surface would be too great, and could cause the backing plate to break. For larger discs, the embodiment of Figures 3 and 4 should be used.

The arrangement according to the present invention, on the other hand, permits the drive shaft 13 to be fixed closer to the rear side 10 of the backing plate, and to extend forward of the sunken surface, whereby larger tilting forces relative to the axis of the hub can be sustained. This is neither disclosed nor suggested by Hettes et al.

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The claims as amended being definite and patentably distinguishable from the art of record, withdrawal of the rejections and early allowance are solicited . If any objections remain, a call to the undersigned is requested.

It is believed that no fees or charges are required at this time in connection with the filing of this amendment; however, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

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